

AMENDMENTS TO THE SPECIFICATION

A. Please delete paragraph 0011.1.

~~[0011.1] FIG 5 illustrates a configuration in which the all around sidewall(s) 113 taper outward.~~

B. Please amend paragraph 0013 as follows:

[0013] Referring to FIG. 1, a foundation pile according to the present invention is depicted in the form of a precast concrete pile 101. The concrete pile 101 may be made from materials, mixtures, and components generally known in the art. The concrete pile 101 has a top end wall 105, a bottom end wall 107, and an all-around sidewall sidewall(s) 113 extending therebetween. The top end wall 105 is designed to sustain a downwardly directed driving force (*e.g.*, applied by hydraulic ram) during installation of the pile 101 into the soil or earth. The bottom end wall 107 is provided sufficient bottom surface area to meet certain end load bearing requirements of the pile 101 (also the cross-sectional area of the body must be sufficient for buckling and torsional loads). In the embodiment of FIG. 1, the top end wall 105 and the bottom end wall 107 are generally identical, in that each has a flat surface of generally the same surface area. In further embodiments, the sidewall sidewalls 113 may not be generally straight and the bottom end wall 107 may provide a larger and/or irregular surface area. ~~FIG 5 illustrates a configuration in which the sidewalls 113 taper outward and the bottom end wall 107 is larger than the top end wall 105.~~

C. Please amend paragraph 0016 as follows:

[0016] In one unique aspect of the invention, the preferred concrete pile 101 is precast in a special-shaped mold. As illustrated by FIGS. 1-3, such a mold provides the inventive concrete pile 101 a pair of spiral ridges 109, each of which is directed or extends spirally downward about the sidewall sidewalls 113 of the concrete body 103. The spiral ridge 109 preferably extends entirely from the top end wall 105 downwardly to the bottom end wall 107. As best shown in FIG. 2, all spiral ridge “according to the invention” is defined, at least partially, by a notch or offset 109a from the sidewall sidewalls 113 that creates an offset surface 109b extending therefrom and which, as will be explained below,

enhances the support capacity of the foundation pile 101. The pile 101 is preferably oriented, during installation, such that both offset surfaces 109b faces generally downward (rather than generally upward) or in the direction of rotation (denoted by “AA” in FIGS. 1 and 3).

D. Please amend paragraph 0021 as follows:

[0021] Now also referring to FIG. 4, the foundation pile 101 according to the invention is provided with structural features that enhance the supporting capacity of the pile (as well as facilitate its installation). In particular, the inventive foundation pile 101 is equipped with the structurally advantageous spiral ridge 109. The spiral ridge 109 provides an additional load bearing surface in the form of the offset surfaces 109b. The offset surfaces 109b supplement the bearing capacity of the end wall 107 to increase the overall load bearing capacity of the foundation pile 101 (which is also supplemented by the frictional surface ~~areas~~ area provided by the ~~sidewalls~~ sidewall). This is illustrated by the simplified force-body diagram of FIG. 4, wherein the resistant force or load bearing capacity of these surfaces is denoted by “BB”, the frictional forces denoted by “CC”, and the vertical load imparted on the pile 101 is denoted by LL. With respect to the foundation pile 101 of FIGS 1-3, a spiral ridge that is 12" long and 1/2" wide provides an additional load bearing surface of 6 square inches, or a total of 12 square inches for two spiral ridges. In contrast, if the foundation pile of FIGS. 1-3 did not have the spiral ridges (as in the prior art), its end load bearing surface would be provided by the end wall surface area or approximately 28 square inches (*e.g.*, πR^2 , where $R=3"$). Thus, a foundation pile according to the invention provides 1.5 times more load bearing capacity than the end wall of a corresponding prior art foundation pile—as a result of the spiral ridge.